



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,220	12/18/2001	Caroline Dean	Mewburn	7555

110 7590 03/21/2003

DANN DORFMAN HERRELL & SKILLMAN  
SUITE 720  
1601 MARKET STREET  
PHILADELPHIA, PA 19103-2307

EXAMINER

BAUM, STUART F

ART UNIT	PAPER NUMBER
----------	--------------

1638

DATE MAILED: 03/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/890,220

Applicant(s)

DEAN ET AL.

Examiner

Stuart F. Baum

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 60-106 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-10 and 60-106 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1638

## **DETAILED ACTION**

### ***Claim Objections***

1. Objection is made to the claims for not incorporating SEQ ID NO's when referring to nucleic acid or amino acid sequences. 37 CFR 1.821(d) requires the use of the assigned sequence identifier (e.g. SEQ I.D. NO: X) in all instances where the description or claims of a patent application discuss sequences. See claims 66 and 70 for example.
2. Applicant is requested to re-submit pages 6, 8, and 10 of the preliminary amendment because the top sentence is too close to the top of the page and has holes punched through words of the top sentence.

### ***Election/Restrictions***

3. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-4, 60-65, 72-75, and 78 drawn to an isolated nucleic acid of SEQ ID NO:1 from the VRN2 locus of a plant encoding SEQ ID NO:2 and to a method of identifying or cloning a nucleic acid comprising hybridizing a probe to a nucleic acid molecule.

Art Unit: 1638

Group II, claim(s) 1-2, 5-6, 60-65, 72-75, and 78 drawn to an isolated nucleic acid of SEQ ID NO:4 from the VRN2 locus of a plant encoding SEQ ID NO:5 and to a method of identifying or cloning a nucleic acid comprising hybridizing a probe to a nucleic acid molecule.

Claims 1 and 2 link inventions I and II. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim(s), claims 1 and 2. Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Group III, claim(s) 7, 8, 60-65, 72-75, and 78 drawn to an isolated nucleic acid of SEQ ID NO:7 from the VRN2 locus of a plant encoding SEQ ID NO:8 and to a method of identifying or cloning a nucleic acid comprising hybridizing a probe to a nucleic acid molecule.

Group IV, claim(s) 9-10, 60-65, 72-75, and 78 drawn to an isolated nucleic acid obtainable from the VRN2 locus of a plant and to a method of identifying or cloning a nucleic acid comprising hybridizing a probe to a nucleic acid molecule.

Art Unit: 1638

**If Applicant elects Group IV, Applicant is also to elect one of the following sequences:**

**SEQ ID NO:3;      SEQ ID NO:6.**

Group V, claim(s) 66-70, drawn to an isolated nucleic acid for use as a probe or primer.

**If Applicant elects Group V, Applicant is also to elect one nucleic acid sequence from list "A" and one amino acid sequence from list "B".**

- A.    SEQ ID NO:2;      SEQ ID NO:5;      SEQ ID NO:8**
- B.    SEQ ID NO:1;      SEQ ID NO:3;      SEQ ID NO:4;      SEQ ID NO:6;  
      SEQ ID NO:7**

Group VI, claim(s) 71, drawn to a process for producing a nucleic acid.

**If Applicant elects Group VI, Applicant is also to elect one nucleic acid sequence from list "A".**

- A.    SEQ ID NO:1;      SEQ ID NO:3;      SEQ ID NO:4;      SEQ ID NO:6;  
      SEQ ID NO:7**

Group VII, claim(s) 72-74, and 76-78, drawn to a method of identifying or cloning a nucleic acid comprising PCR.

**If Applicant elects Group VII, Applicant is also to elect one nucleic acid sequence from list "A" and one amino acid sequence from list "B".**

- A.    SEQ ID NO:2;      SEQ ID NO:5;      SEQ ID NO:8**
- B.    SEQ ID NO:1;      SEQ ID NO:3;      SEQ ID NO:4;      SEQ ID NO:6;  
      SEQ ID NO:7**

Group VIII, claim(s) 79-92, drawn to a recombinant vector comprising a nucleotide sequence and promoter, transformed host cell and transgenic plant.

Art Unit: 1638

**If Applicant elects Group VIII, Applicant is also to elect one nucleic acid sequence from list "A".**

A. SEQ ID NO:1; SEQ ID NO:3; SEQ ID NO:4; SEQ ID NO:6;  
SEQ ID NO:7

Group IX, claim(s) 93-99, and 104, drawn to an isolated polypeptide.

**If Applicant elects Group IX, Applicant is also to elect one amino acid sequence from list "A".**

A. SEQ ID NO:2; SEQ ID NO:5; SEQ ID NO:8

Group X, claim(s) 100-101, drawn to an isolated nucleic acid encoding a fragment of  
SEQ ID NO:2, 5, or 8.

**If Applicant elects Group X, Applicant is also to elect one nucleic acid sequence from list "A".**

A. SEQ ID NO:1; SEQ ID NO:3; SEQ ID NO:4; SEQ ID NO:6;  
SEQ ID NO:7

Group XI, claim(s) 102, drawn to a method a making the polypeptide of SEQ ID NO:2, 5,  
or 8.

Group XII, claim(s) 103, drawn to an antibody.

Group XIII, claim 105, drawn to a method for affecting a physical characteristic of a  
plant comprising allowing transcription from a nucleic acid.

Group XIV, claim(s) 106, drawn to a method of reducing VRN2 expression by co-  
suppression.

**If Applicant elects Group XIV, Applicant is also to elect one nucleic acid sequence from list "A".**

Art Unit: 1638

A. SEQ ID NO:1; SEQ ID NO:3; SEQ ID NO:4; SEQ ID NO:6;  
SEQ ID NO:7

4. The claims are not linked by a single special technical feature because the invention of Group XIII does not constitute an advance over the prior art. Group XIII is taught by Chandler et al (1996, The Plant Journal 10(4):637-644) who teach plants with altered response to vernalization by allowing transcription of any of the endogenous mutant *vrn* genes, which would comprise a nucleic acid sequence, that is a fragment of any of the sequences listed in claim 105. Hence, there is no special technical feature that links the nucleic acid sequences of Groups I-V, or to the process of producing a nucleic acid of Group VI, or to the method of identifying or cloning a nucleic acid comprising PCR of Group VII, or to the recombinant vector comprising a nucleotide sequence and promoter, transformed host cell and transgenic plant of Group VIII, or to the isolated polypeptide of Group IX, or to the isolated nucleic acid encoding a fragment of SEQ ID NO:2, 5, or 8 of Group X, or to the method a making the polypeptide of SEQ ID NO:2, 5, or 8 or Group XI, or to the antibody of Group XII, or to the method for affecting a physical characteristic of a plant comprising allowing transcription from a nucleic acid of Group XIII, or to the method of reducing VRN2 expression by co-suppression of Group XIV.

5. Furthermore, nucleotide sequences either encoding different proteins or specifying specific expression patterns are structurally distinct chemical compounds and are unrelated to one another, as are different proteins structurally distinct chemical compounds and unrelated to one another. Absent evidence to the contrary, each such sequence is presumed to represent an independent and distinct invention. This requirement is not to be construed as a requirement for an election of species, since each nucleotide and amino acid sequence is not a member of a single

Art Unit: 1638

genus of invention, but constitutes an independent and patentably distinct invention. In addition, the methods of Groups VII, XI, XIII, and XIV are distinct because the starting material, method steps and end products are distinct one from the other.

6. Because these inventions are distinct for the reasons given above and the search required for the individual Groups is distinct from the other, restriction for examination purposes as indicated is proper.

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart Baum whose telephone number is (703) 305-6997. The examiner can normally be reached on Monday-Friday 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3014 or (703) 305-3014 for regular communications.




Art Unit: 1638

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who may be contacted at 308-0196.

Stuart F. Baum Ph.D.

March 17, 2003

  
PHUONG T. BUI  
PRIMARY EXAMINER